

also intended to function as rescue access windows, the minimum requirements for the number and location of rescue access windows in paragraphs (a)(1) through (a)(4) of this section are also met for that level.

(b) *Ease of operability.* On or after April 1, 2008, each rescue access window must be capable of being removed without unreasonable delay by an emergency responder using either—

(1) A provided external mechanism; or

(2) Tools or implements that are commonly available to the responder in a passenger train emergency.

(c) *Dimensions.* Each rescue access window in a passenger car, including a sleeping car, ordered on or after April 1, 2009, or placed in service for the first time on or after April 1, 2011, shall have an unobstructed opening with minimum dimensions of 26 inches horizontally by 24 inches vertically. A rescue access window located within an exterior side door, in accordance with the requirements of paragraph (a)(3)(i) of this section, may have an unobstructed opening with minimum dimensions of 24 inches horizontally by 26 inches vertically. A seatback is not an obstruction if it can be moved away from the window opening without using a tool or other implement.

(d) *Marking and instructions.* (1) Prior to January 28, 2015, each rescue access window shall be marked with retroreflective material on the exterior of each car. A unique and easily recognizable symbol, sign, or other conspicuous marking shall also be used to identify each such window. Legible and understandable window-access instructions, including instructions for removing the window, shall be posted at or near each rescue access window.

(2) On or after January 28, 2015, each rescue access window shall be marked, and instructions provided for its use, as specified in § 238.125.

[73 FR 6401, Feb. 1, 2008, as amended at 78 FR 71813, Nov. 29, 2013]

§ 238.115 Emergency lighting.

(a) Prior to January 1, 2017, the requirements specified in paragraphs (a)(1) through (4) of this section apply to each passenger car ordered on or after September 8, 2000, or placed in

service for the first time on or after September 9, 2002. Emergency lighting shall be provided in each passenger car and shall include the following:

(1) A minimum, average illumination level of 1 foot-candle measured at floor level adjacent to each exterior door and each interior door providing access to an exterior door (such as a door opening into a vestibule);

(2) A minimum, average illumination level of 1 foot-candle measured 25 inches above floor level along the center of each aisle and passageway;

(3) A minimum illumination level of 0.1 foot-candle measured 25 inches above floor level at any point along the center of each aisle and passageway; and

(4) A back-up power system capable of:

(i) Operating in all equipment orientations within 45 degrees of vertical;

(ii) Operating after the initial shock of a collision or derailment resulting in the following individually applied accelerations:

(A) Longitudinal: 8g;

(B) Lateral: 4g; and

(C) Vertical: 4g; and

(iii) Operating all emergency lighting for a period of at least 90 minutes without a loss of more than 40% of the minimum illumination levels specified in this paragraph (a).

(b)(1) As further specified in paragraph (b)(2) of this section, on or after January 1, 2017, emergency lighting shall be provided in each passenger car in accordance with the minimum requirements specified in APTA PR-E-S-013-99, Rev. 1, "Standard for Emergency Lighting System Design for Passenger Cars," Authorized October 7, 2007, or an alternative standard providing at least an equivalent level of safety if approved by FRA pursuant to § 238.21. The incorporation by reference of this APTA standard was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. You may obtain a copy of the incorporated document from the American Public Transportation Association, 1666 K Street NW., Washington, DC 20006, www.aptastandards.com. You may inspect a copy of the document at the Federal Railroad Administration,

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Docket Clerk, 1200 New Jersey Avenue SE., Washington, DC or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) No later than December 31, 2015, at least 70 percent of each railroad's passenger cars that were ordered prior to September 8, 2000, and placed in service prior to September 9, 2002, shall be in compliance with the emergency lighting requirements provided in paragraph (b)(1) of this section.

[78 FR 71813, Nov. 29, 2013]

§ 238.117 Protection against personal injury.

On or after November 8, 1999, all moving parts, high voltage equipment, electrical conductors and switches, and pipes carrying hot fluids or gases on all passenger equipment shall be appropriately equipped with interlocks or guards to minimize the risk of personal injury. This section does not apply to the interior of a private car.

§ 238.119 Rim-stamped straight-plate wheels.

(a)(1) Except as provided in paragraph (a)(2) of this section, on or after November 8, 1999, no railroad shall place or continue in service any vehicle, other than a private car, that is equipped with a rim-stamped straight-plate wheel if a brake shoe acts on the tread of the wheel for the purpose of slowing the vehicle.

(2) A commuter railroad may continue in service a vehicle equipped with a Class A, rim-stamped straight-plate wheel mounted on an inboard-bearing axle until the railroad exhausts its replacement stock of wheels held as of May 12, 1999, provided the railroad does not modify the operation of the vehicle in any way that would result in increased thermal input to the wheel during braking.

(b) A rim-stamped straight-plate wheel shall not be used as a replacement wheel on a private car that operates in a passenger train if a brake shoe acts on the tread of the wheel for the purpose of slowing the car.

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(c) The requirements of this section do not apply to a wheel that is periodically tread-braked for a short duration by automatic circuitry for the sole purpose of cleaning the wheel tread surface.

§ 238.121 Emergency communication.

(a) *PA system (public address system).*

(1) *Existing Tier I passenger cars.* On or after January 1, 2012, each Tier I passenger car shall be equipped with a PA system that provides a means for a train crewmember to communicate by voice to passengers of his or her train in an emergency situation.

(2) *New Tier I and all Tier II passenger cars.* Each Tier I passenger car ordered on or after April 1, 2008, or placed in service for the first time on or after April 1, 2010, and all Tier II passenger cars shall be equipped with a PA system that provides a means for a train crewmember to communicate by voice to passengers of his or her train in an emergency situation. The PA system shall also provide a means for a train crewmember to communicate by voice in an emergency situation to persons in the immediate vicinity of his or her train (*e.g.*, persons on the station platform). The PA system may be part of the same system as the intercom system.

(b) *Intercom system.* (1) *New Tier I and all Tier II passenger cars.* Each Tier I passenger car ordered on or after April 1, 2008, or placed in service for the first time on or after April 1, 2010, and all Tier II passenger cars shall be equipped with an intercom system that provides a means for passengers and crewmembers to communicate by voice with each other in an emergency situation. Except as further specified, at least one intercom that is accessible to passengers without using a tool or other implement shall be located in each end (half) of each car. If any passenger car does not exceed 45 feet in length, or if a Tier II passenger car was ordered prior to May 12, 1999, only one such intercom is required. The intercom system may be part of the same system as the PA system.

(2) *Marking and instructions.* The following requirements apply to each passenger car: